

The rejections of the claims under 35 U.S.C. § 102(b) or § 103(a) are respectfully traversed. None of the applied references describe or suggest the claimed propoxylate of formula I.

The fuel compositions of the claimed invention have a propoxylate additive of formula I, in which the number of propylene oxide repeat units, n, is an integer of from 14 to 18. In addition, the propoxylate is end-capped with a group R¹, which is a branched or unbranched C₈-C₁₈ alkyl or alkenyl group. As stated at page 3, line 45 to page 4, line 5 of the present specification, the fuel compositions of the claimed invention reduced intake valve deposits “substantially better than the corresponding shorter-chain or longer-chain propoxylates. This is surprising in particular because it has been assumed to date that compounds of the type used are suitable only as carrier oils for fuel compositions but carrier oils per se do not have a satisfactory cleaning effect in the intake system.” Thus, the present specification *expressly* states that the claimed propoxylate additive of formula I has superior properties to propoxylates having shorter or longer chains. The improved properties provided by the propoxylate additive of the claimed invention are also shown in Tables 1 and 2, pages 14 and 15 of the present specification. A tridecanol end-capped propoxylate having 15 propylene oxide units (i.e., n=15) reduces intake valve deposits significantly compared to otherwise identical propoxylates having 10 propylene oxide units (i.e., n=10), 20 propylene oxide units (i.e., n=20), or 25 propylene oxide units (i.e., n=25). Thus, the claimed fuel composition, having a propoxylate additive of formula I, has significantly improved properties compared to otherwise identical propoxylates in which the number of propylene oxide repeat units is outside the claimed range. Moreover, Applicants respectfully submit that one of ordinary skill in the art of fuel additives would recognize that similar improved results would be provided by propoxylates according to the present invention, in which the R¹

group and the value of n are varied within the claimed ranges, but are somewhat different from those exemplified in Tables 1 and 2 of the present specification.

Polss describes a “polyoxyalkylene additive” in which the number of propylene oxide groups, x, is “from about 4 to about 20” (col. 2, line 48). Polss describes specific polyoxyalkylene compounds in which the number of propylene oxide repeat units is 6-8. However, Polss fails to describe a polyoxyalkylene compound having 14-18 propylene oxide repeat units. Thus, Polss fails to anticipate the claimed invention.

Aiello describes a polyoxypropylene glycol monoether of average molecular weight 1,400 (col. 8, lines 64-65). Aiello fails to describe the number of propylene oxide repeat units. However, the number of propylene oxide repeat units must be approximately 20 (e.g., an end group derived from a C₁₅ alcohol would have a molecular weight of approximately 221 g/mol; propylene oxide repeat units have a molecular weight of approximately 58 g/mol; therefore, the number of propylene oxide repeat units is approximately 20 ([1,400 - 221] / 58 = 20.3). Thus, the polyoxypropylene glycol monoether exemplified in Aiello has a number of propylene oxide repeat units of approximately 20, greater than the maximum number of repeat units of the claimed propoxylate additive. Accordingly, Aiello fails to anticipate the claimed invention.

Daly describes fuel additive compositions in which the number of oxyalkylene units ranges from 4 to about 40 units (page 5, line 22). Daly fails to provide a single example of a fuel additive having a number of repeat units within the claimed range of from 14 to 18. Thus, Daly fails to anticipate the claimed invention.

Thomas appears to describe (based on the German language text) polyethers based on propylene and/or butylene oxide (page 3, line 41). However, Thomas does not appear to describe the claimed propoxylate additives. Rather, the Table at page 5 of Thomas describes fuel compositions having a polybutylene oxide additive (i.e., at page 5, line 43), rather than a

polypropylene oxide (i.e., a propoxylate). Thus, Thomas fails to anticipate the claimed invention.

As discussed above, none of the applied references describe the propoxylate additive of the claimed invention. Furthermore, as discussed above, the present specification shows that compositions comprising the propoxylate additive of formula I of the claimed invention have superior properties compared to otherwise identical propoxylate additives having a number of repeat units, n, outside the claimed range of 14-18. Accordingly, the applied references also fail to suggest the claimed invention. Accordingly, Applicants respectfully request withdrawal of the rejections.

The rejections of the claims under 35 U.S.C. § 112, first paragraph, are respectfully traversed.

In regard to the alleged “new matter”, Applicants respectfully submit that page 9, line 33 to page 10, line 6 of the present specification, as well as the statements made by the Examiner, show that the claimed range of from 14 to 18 is *expressly* described in the present specification, and is therefore not new matter. Specifically, each integer value of “n” in the range of 14 to 18 is *expressly* recited in the specification, and in the Examiner’s stated grounds of rejection. Applicants note that it has long been held that the “subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement” (M.P.E.P. § 2163.01). Accordingly, Applicants respectfully request withdrawal of the rejection.

The Examiner also alleges that the combination of a propoxylate of formula I and of a detergent of formula II is “critical or essential to the practice of the invention.” However, Applicants respectfully submit that this combination is simply a preferred embodiment, as discussed at page 4, lines 11-26 of the specification. Thus, the detergent additive is not

“essential” to the practice of the invention as alleged by the Examiner. Accordingly, Applicants respectfully request withdrawal of the rejection.

The rejections of the claims under 35 U.S.C. § 112, second paragraph, are obviated by appropriate amendment. The word “and” has been inserted in Claim 3 as suggested by the Examiner.

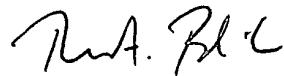
In regard to Claims 10 and 13, Applicants have deleted the word “mixture” from both claims. Furthermore, Applicants note that Claim 10 is directed to a fuel additive, whereas Claim 13 is directed to a fuel additive *concentrate*. Thus, Applicants respectfully submit that Claims 10 and 13 are not substantial duplicates.

For the reasons stated above, Applicants respectfully request withdrawal of the rejections.

Accordingly, Applicants respectfully submit that the present application is now in condition for allowance, and early notification thereof is earnestly solicited.

Respectfully submitted,

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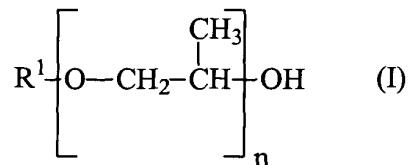
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IN THE CLAIMS

--3. (Amended) A fuel composition for internal combustion engines, containing a principle amount of a liquid hydrocarbon fuel, comprising an amount, which has an intake system cleaning effect, of an additive combination comprising

i) at least one propoxylate additive of the formula I



where

n is an integer of from 14 to 18 and

R^1 is straight-chain or branched $\text{C}_8\text{-C}_{18}$ -alkyl or $\text{C}_8\text{-C}_{18}$ -alkenyl; and

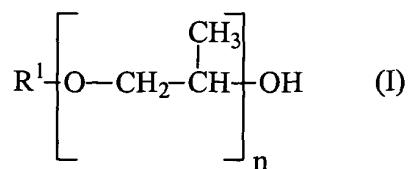
ii) at least one detergent additive, selected from a polyalklyamine additive of the formula II



where R^2 is a straight-chain or branched polyalkyl radical having a number average molecular weight of from about 500 to about 5000; and

if required in combination with at least one lubricity additive.

10. (Amended) A fuel additive [mixture which contains] comprising, as intake valve cleaner component, at least one propoxylate additive of the formula I



where

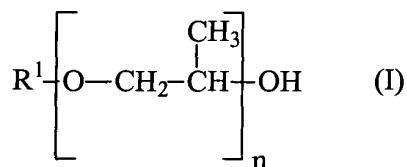
n is an integer of from 14 to 18 and

R^1 is straight-chain or branched C₈-C₁₈-alkyl or C₈-C₁₈-alkenyl,

if required in combination with at least one detergent additive and, if required,

together with further conventional fuel additives.

13. (Amended) A fuel additive [mixture formulated as an additive] concentrate, comprising as an intake valve cleaner component at least one propoxylate additive of the formula I



where

n is an integer of from 14 to 18 and

R^1 is straight-chain or branched C₈-C₁₈-alkyl or C₈-C₁₈-alkenyl,

if required in combination with at least one detergent additive and, if required,

together with further conventional fuel additives.

17-18. (New).--